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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,092	06/25/2003	Gregory D. Cooper	2476-30	1919
23117	7590	05/11/2004	EXAMINER	
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714				FULLER, RODNEY EVAN
ART UNIT		PAPER NUMBER		
		2851		

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/603,092	COOPER ET AL.
	Examiner	Art Unit
	Rodney E Fuller	2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 June 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 25 June 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the abstract exceeds the "150-words" limit. Correction is required. See MPEP § 608.01(b).

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,600,551 (Cooper, et al.).

Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

- a. Claim 1 is identical to claim 1 of US 6,600,551 with the exception of (i) the limitation “a programmable photolithographic mask” has been changed to “a programmable mask”; (ii) the limitation “an active region consisting of a material” has been changed to “an active region comprising a material”; (iii) the limitation “by application of a voltage” has been changed to by application of a stimulus”; (iv) the limitation “the controller controlling the voltage” has been changed to “the controller controlling the stimulus”.
- b. Claims 2-5 are identical to claims 2-5 of US 6,600,551.
- c. Claims 6 is identical to claim 6 of US 6,600,551 with the exception of (i) the limitation “disposed between the substrate” has been changed to “disposed between the wafer”; the limitation “an active region consisting” has been changed to “an active region comprising”; and the limitation “at least part of the substrate” has been changed to “at least part of the wafer”.
- d. Claim 7 is identical to claim 7 of US 6,600,551.
- e. Claim 8 is identical to claim 9 of US 6,600,551 with the exception of (i) the limitation “an active region consisting of material which can be made transparent or opaque by applying a voltage to change the density of occupied initial states or the density of unoccupied final states of the electrons” has been changed to “an active region comprising a material which can be made transparent or opaque by applying a voltage or

current to change the density of occupied initial states or the density of unoccupied final states of the electrons.”

- f. Claims 9 and 10 are identical to claims 10 and 11 of US 6,600,551.
- g. Claim 11 is identical to claim 12 of US 6,600,551 with the exception of (i) the limitation “having holes consisting of” has been changed to “having holes comprising a”; (ii) the limitation “a voltage” has been changed to “a voltage or current”.
- h. Claims 12 and 13 are identical to claims 13 and 14 of US 6,600,551.
- i. Claim 14 is identical to claim 15 of US 6,600,551 with the exception (i) the limitation “controlling the applied voltage” has been changed to “controlling a voltage or current”.
- j. Claims 15-17 are identical to claims 16-18 of US 6,600,551.
- k. Claim 18 is identical to claim 19 if US 6,600,551 with the exception of (i) the limitation “an active region consisting of” has been changed to “an active region comprising”; the limitation “by applying a voltage” has been changed to “by applying a voltage or current”.
- l. Claims 19 and 20 are identical to claim 20 and 21 of US 6,600,551.
- m. Claim 21 is identical to claim 22 of US 6,600,551 with the exception of (i) the limitation “said applied voltage” has been changed to “said applied voltage or current”.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US 6,600,551 (Cooper) in the manner described above because (i) the stimulus of the two dimensional array by either a voltage, current, or the broader term “stimulus” would be an obvious matter of design choice since it appears that the invention would perform

equally well with either a voltage or a current applied as the stimulus; (ii) the term "substrate" and "wafer" are referring the identical structure; (iii) the other changes appear to by more or less typographical in nature.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller
Primary Examiner
Art Unit 2851



May 3, 2004